

CLAIMS

What is claimed is:

1. An animal feed suitable for feeding a gestating animal, which animal feed is enriched in arginine, such that a daily dosage of at least 200 mg arginine per kg body weight of said gestating animal (kgbw) is provided upon feeding, which feed comprises amino acids in an amount relative to lysine (w/w) in the following ranges:

methionine + cysteine:	>0.55;
threonine:	>0.60; and
tryptophan	>0.15.

2. The animal feed of claim 1, which feed is enriched in arginine, such that a dosage of 200 - 1300 mg / (kgbw day) arginine is provided upon feeding.

3. The animal feed of claim 1 or claim 2, which contains from 1.25 to 10 wt% arginine.

4. The animal feed of claim 3, wherein arginine is present in such an amount that the total arginine/lysine (w/w) content is greater than 1.5.

5. The animal feed of claim 3, wherein arginine is present in such an amount that the total arginine/lysine (w/w) content is greater than 2.25.

6. The animal feed of claim 1, claim 2, claim 3, claim 4, or claim 5, comprising one or more amino acids in an amount relative to lysine (w/w) in the following ranges:

methionine + cysteine:	0.55-0.70;
threonine:	0.60-0.80; and
tryptophan:	0.15-0.25.

7. The animal feed of claim 1, claim 2, claim 3, claim 4 claim 5, or claim 6, wherein the total amount of lysine in the animal feed is below 0.8 wt.%.

8. The animal feed of claim 1, claim 2, claim 3, claim 4 claim 5, claim 6, or claim 7, wherein the amount of Ca^{2+} is below 1.0 wt%.

9. The animal feed of claim 1, claim 2, claim 3, claim 4 claim 5, claim 6, claim 7, or claim 8, wherein the arginine is selected from the group consisting of synthetic arginine, arginine rich polypeptide, arginine rich protein, and mixtures thereof.

10. A premix containing arginine in a sufficient amount, upon mixing with feed, to produce an animal feed suitable for feeding a gestating animal, said animal feed being enriched in arginine such that a daily dosage of at least 200 mg arginine per kg body weight of the gestating animal is provided upon feeding, which animal feed comprises amino acids in an amount relative to lysine (w/w) in the following ranges:

methionine + cysteine:	>0.55;
threonine:	>0.60; and
tryptophan:	>0.15.

11. A method for increasing the breeding productivity of an animal, said method comprising: providing a diet to at least one gestating animal resulting in a daily dosage of 200 - 1300 mg arginine per kg body weight of said at least one gestating animal.

12. The method according to claim 11, wherein said method comprises feeding the animal an animal feed enriched in arginine, such that a daily dosage of at least 200 mg arginine per kg body weight of said gestating animal is provided upon feeding, which animal feed comprises amino acids in an amount relative to lysine (w/w) in the following ranges:

methionine + cysteine:	>0.55;
threonine:	>0.60; and
tryptophan:	>0.15.

13. The method according to claim 12, wherein the feeding takes place during critical periods for placental angiogenesis.

14. The method according to claim 12, wherein said feeding takes place during periods of placental angiogenesis and growth.

15. The method according to claim 12, wherein said feeding takes place during the perinatal period of gestation.

16. The method according to claim 11, wherein the animal is a pig and the feeding takes place at days 14-30 of gestation.

17. The method according to claim 16, wherein the feeding also takes place at days 105-115 of gestation.

18. The method according to claim 11, wherein the animal is a pig and the diet is provided at days 14-30 of gestation.

19. The method according to claim 18, wherein the diet is also provided at days 105-115 of gestation.

20. The animal feed of claim 1, which animal feed is enriched in arginine, such that a dosage of 250 - 650 mg / (kgbw day) arginine is provided upon feeding.